BIOLOGICAL TECHNICAL REPORT
FOR
SAINT ADELAIDE CHURCH
MUP 14-056, ER 04-21-004

PREPARED FOR:

Deacon Ray Arnold
PO Box 85728
San Diego, CA 92186

PREPARED BY:

Robin Church
RC Biological Consulting
4215 Spring Street, Suite 321
La Mesa, CA 91941
(619) 463-1072

Final Version
December 2006

Robin Church

Robin Church
County Certified Biologist

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 SUMMARY OF FINDINGS

The proposed project is the development of 5.13 acre gross parcel into a church including the sanctuary building, education building, multi-purpose building and parking lot.

The proposed project is located northeast of the community of Campo and south of the 94 freeway and southwest of interstate 8 (Figure 1). The project area is in the northeast corner of Cluster Road and Sheridan Road. It is accessible from Sheridan Road. The site is shown on the Campo 7.5' USGS Quadrangle, Section 15, Township 18 South, Range 5 East (Figure 2).

This report provides information regarding existing conditions, compliance with the Resource Protection Ordinance (RPO), and performs an impact analysis based on the current site design. This report also identifies mitigation measures to reduce any impacts to below a level of significance.

A general biological survey, sensitive plant survey, and Quino checkerspot butterfly (*Euphydryas editha quino*) survey were performed on-site. The biological resources on-site include two habitat types: big sagebrush scrub and developed. The big sagebrush scrub constitutes a sensitive habitat pursuant to the Resource Protection Ordinance.

No state or federally listed plant or animal species were observed on-site. No sensitive plant species were observed. One sensitive wildlife species was observed on-site, the San Diego black-tailed jackrabbit (*Lepus californicus benettii*). Forty sensitive species have the potential to occur on-site and are discussed in Appendix D. Of the forty species, none have a high potential to occur, and three have a moderate potential to occur. The species with a moderate potential to occur on-site are northern red diamond rattlesnake (*Crotalus ruber ruber*), coast rosy boa (*Charina trivirgata roseofusca*) and southern mule deer (*Odocileus hemionus fuiliginata*). All of these species are state and/or federal special concern species except for the southern mule deer which is a County sensitive species.

Impacts to approximately 4.96 acres of big sagebrush scrub may occur as a result of the proposed project. This impact would be considered locally important. Mitigation for impacts to the big sagebrush will be achieved through the acquisition of 4.96 acres of similar or higher value habitat off-site. Mitigation is proposed at a 1:1 ratio due to the disturbed condition of the site. Potential impacts to sensitive animal species observed and species with a high or moderate potential to occur on-site will be mitigated by the habitat-based mitigation. Implementation of these mitigation measures will prevent the project from having a significant cumulative impact in the region.

2.0 INTRODUCTION

The proposed project is the development of 5.13 acre gross parcel into a church including the sanctuary building, education building, multi-purpose building and parking lot.

The proposed project is located northeast of the community of Campo and south of the 94 freeway and southwest of interstate 8 (Figure 1). The project area is in the northeast corner of Cluster Road and Sheridan Road. It is accessible from Sheridan Road. Campo Lake is approximately a half mile from the site to the southeast. The site is shown on the Campo 7.5' USGS Quadrangle, Section 15, Township 18 South, Range 5 East (Figure 2).

Topography, Soils, Land Use

The project is a relatively flat site. Elevations on-site range from approximately 2595 feet above mean sea level in the west corner of the property, to approximately 2629 feet above mean sea level at the east corner of the property.

The soil on the property is La Posta loamy coarse sand (LaE2) and Mottsville loamy coarse sand (MvC) (Bowman 1973). La Posta loamy course sand is present on 5 to 30 percent slopes and usually occurs on gently rolling hills. This soil type is derived from granodiorite and is well drained.

The Mottsville series consists of excessively drained, very deep, loamy coarse, sands that in some areas formed in sandy sediments transported from granitic rock, and in others in material weathered in place from granitic rock. These soils occur in valleys and on alluvial fans and have slopes of 0 to 15 percent.

Currently the site is undeveloped with concrete structure pads remaining from previous development asCamp Lockett Military Reservation which was used from 1941 to 1946 when it became a military medical care facility (Laguna Mountain Environmental March 2006). An unused dirt road also remains.

Regional Setting

The proposed project is located outside of the Multiple Species Conservation Program (MSCP). The site is located in an area of undeveloped lands with a small rural-residential area to the east of the MSCP.

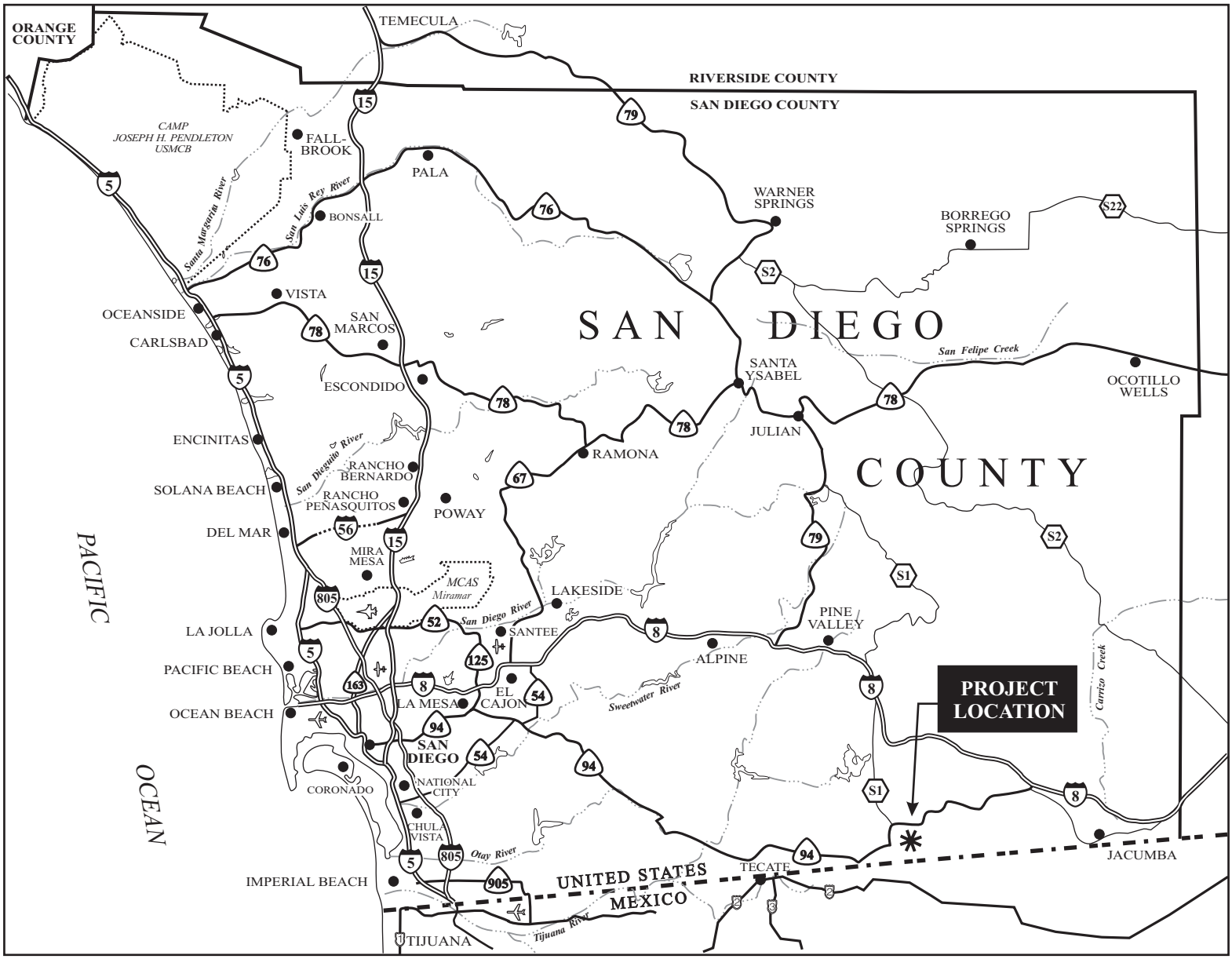
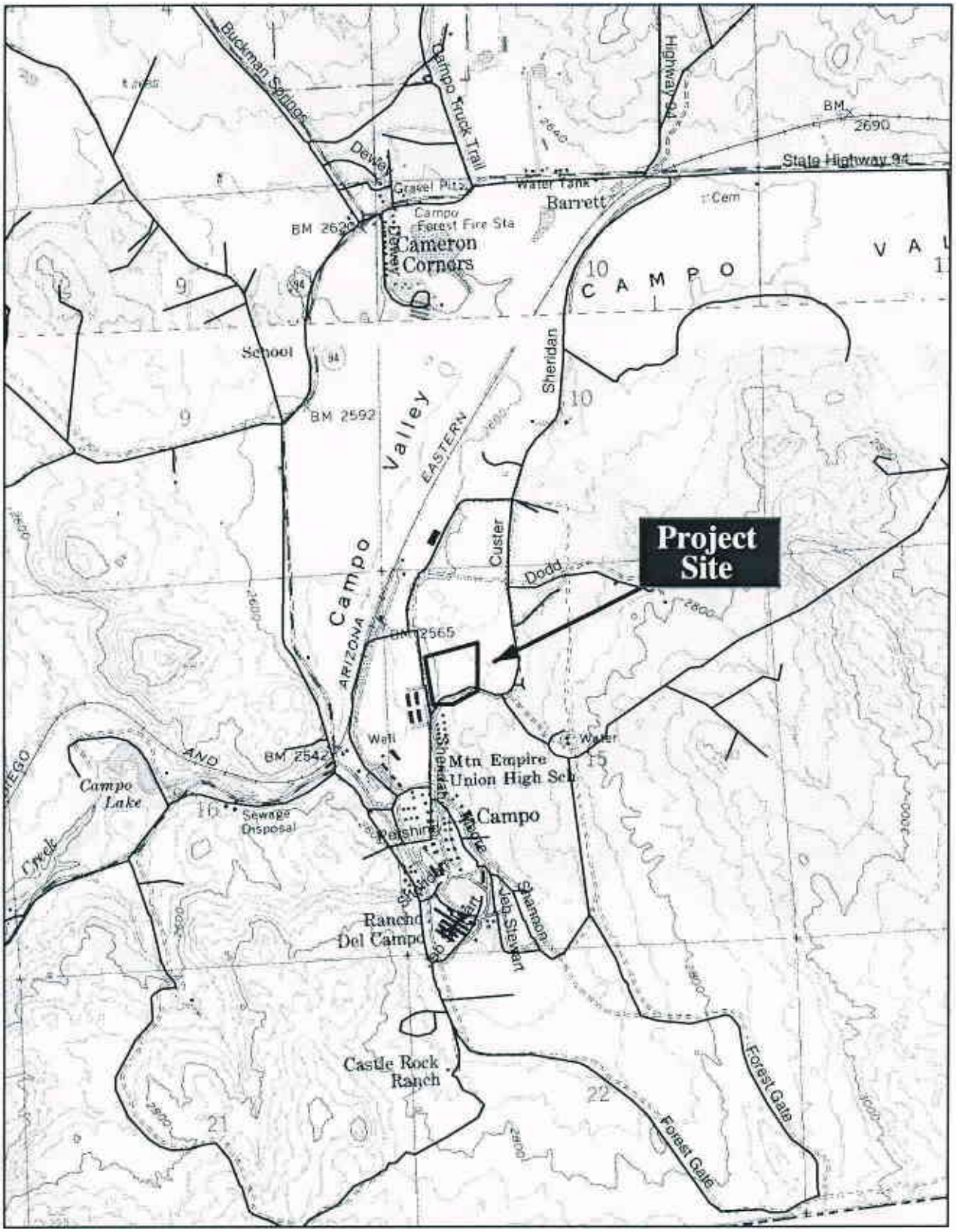
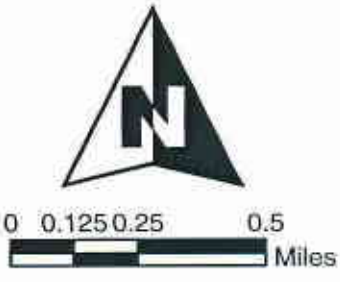


Figure 1
Regional Location Map



Source: USGS 7.5' Campo Quadrangle

Figure 2
Project Location



3.0 SURVEY METHODOLOGY

The site was surveyed on foot and habitat mapped (Figure 3). Mapping was performed following the Biological Resources Mapping Requirements (County 2002). Wildlife species were identified directly by sight or by vocalizations, and indirectly by scat, tracks, or burrows. Field notes were maintained throughout the surveys and species of interest were mapped. Surveys focused on sensitive plant and wildlife species and all species observed were noted. The presence or absence of suitable habitat for sensitive species was also identified.

Table 1
Surveys performed on the St. Adelaide Property

Date	Time	Survey	Temperature (°F)	Sky	Wind (mph)	Observers
3/29/05	1515-1600	Quino Survey, Sensitive Plant	60-57	Partly Cloudy	2-6	AP
4/7/05	1530-1630	Quino Survey, Sensitive Plant	62-60	Clear	2-9	AP
4/14/05	1330-1430	Quino Survey, Sensitive Plant	70-68	Clear	0-4	AP
4/21/05	1530-1615	Quino Survey, Sensitive Plant	70-69	Clear	0-6 to 0-4	AP
5/1/05	1600-1645	Quino Survey, Sensitive Plant	71-69	Clear	0-4	AP
5/10/05	1600-1645	Quino Survey, General Survey	64-65	Some Clouds	2-6	AP, NB

AP=Andrew Pigniolo NB= Nicole Bailey

The primary focus of the survey was to document and map the size, location, and general quality of all habitat types and the presence or potential presence of any sensitive resources (plant or wildlife) on-site.

Nomenclature for this report conforms to Hickman (1993) for plants, Holland (1986) and Oberbauer (1996) for plant communities and habitat types, American Ornithological Union (AOU 1998, 2000) for birds, Jennings (1983) and Stebbins (2003) for reptiles and amphibians, Jones (1992) for mammals, and Powell (1979) for insects.

4.0 RESULTS

The following discussion summarizes the existing biological resources on-site including habitats, vegetation and wildlife. Habitats are depicted on Figure 3.

Legend:

Big Sagebrush Scrub (4.96 acres)
Habitat Code: 35210

Developed (0.17 acres)
Habitat Code: 12000

Scale 1"=80'

RC
Biological Consulting, Inc.

Habitat Map for St. Adelaide Church

December 2006

Figure 3

4.1 Vegetation

Habitat descriptions are based on the County of San Diego's Biological Mapping Requirements (County 2002) and Terrestrial Vegetation Communities in Sand Diego County based in Holland's Descriptions (Oberbauer 1996), however, it has been shown that habitats on the project sites in San Diego County are often not pristine and rarely fit into one description. Therefore the best-fit definition based on the County's current descriptions and dominant plant species has been applied. Two habitat types, big sagebrush scrub and developed occur within the project site (Figure 3). A complete list of plant species observed on-site is included in Appendix A.

Big Sagebrush Scrub (Habitat Code: 35210)

Big sagebrush scrub (*Artemesia tridentata*) covers approximately 4.96 acres of the site. Big sagebrush scrub is composed of mostly soft-woody shrubs from 0.5 to 2 meters tall usually with bare ground underneath and between shrubs. The site consists of big sagebrush scrub regrowth from past disturbances. Other species occurring on-site are California buckwheat (*Eriogonum fasciculatum*), popcorn flower (*Plagiobothrys sp*.) and filaree (*Erodium cicutarium*).

Developed (Habitat Code: 12000)

The developed habitat on-site consists of the remaining concrete pads and supports from the previous development. Approximately 0.17 acres of this habitat occurs on-site.

4.2 Wildlife

A total of nineteen wildlife species were identified on-site. These included nine invertebrate species, one reptile species, six bird species, and three mammal species. A complete list of wildlife species observed on-site is included as Appendix B.

Invertebrates observed on-site included red ants (*Formica sp*.) and butterflies such as common white (*Ponita protodice*) and Behr's metalmark (*Apodemia mormo virgulti*). The reptile species observed on-site was the granite spiny lizard (*Sceloporus orcutti*). Bird species observed included the mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), and California quail (*Callipepla californica*). Mammals on-site were detected by sign, and included the San Diego black-tailed jackrabbit (*Lepus californicus benettii*), desert cottontail rabbit (*Sylvilagus audubonii*) and Botta's pocket mouse (*Thomomys bottae*).

4.3 Sensitive Resources

Sensitive or special interest plant and wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive habitats, as identified by these same groups, are those which generally support plant or wildlife species considered sensitive by these resource protection agencies or groups. Sensitive species and habitats are so called because of their limited distribution, restricted habitat requirements, particular

susceptibility to human disturbance, degradation due to development or invasion by non-native species, or a combination of all of these factors.

In addition to RPO, the following were used in the determination of sensitive biological resources: U.S. Fish and Wildlife Service (USFWS) (USFWS 2001); California Department of Fish and Game (CDFG) (CDFG 1999, 2000 and 2001); and California Native Plant Society Electronic Inventory (CNPS 2003). An explanation of the sensitivity codes used in this report is included in Appendix E.

Applicable Resource Conservation Plans and Ordinances

In San Diego County, regulations have been adopted which define and provide protection to certain types of sensitive biological resources as follows:

Resource Protection Ordinance (RPO)

The purpose of the RPO is to protect sensitive resources and prevent their degradation and loss. The sensitive resources protected by the RPO include wetlands, wetland buffer areas, and sensitive habitat lands, which are defined as follows:

> "Wetland" areas include lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are “wetlands”:
>
> a) At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);
> b) The substratum is predominantly undrained hydric soil; or
> c) The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season of each year.
>
> "Wetland buffer" areas include lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community.
>
> "Sensitive habitat lands" include those which support unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants, including the area which is necessary to support a viable population of any of these species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning corridor.

4.3.1 Sensitive Habitats

Big sagebrush scrub is the only sensitive habitat on-site.

Big Sagebrush Scrub

Although still a relatively plentiful habitat, big sagebrush scrub is considered a sensitive habitat pursuant to RPO.

4.3.2 Sensitive Plants

Sensitive or special interest plant species are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive plant species are so called because of their limited distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive plant species include: CDFG (1999) and the California Native Plant Society Electronic Inventory (CNPS 2003).

A sensitive plant survey was performed on-site and plants were noted during all of the Qunio checkerspot butterfly surveys as well. No sensitive plant species were observed. All of the species would have been observable. Twenty-seven sensitive plant species are known from the area. Sensitive plants with a potential to occur on-site are discussed in Appendix C.

4.3.3 Sensitive Animals

Sensitive or special interest wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive species are so called because of their limited distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive biological resources include: USFWS (USFWS 2001), CDFG (CDFG 2000 and 2001). Additional species receive federal protection under the Bald Eagle Protection Act and the Migratory Bird Treaty Act and Convention for the Protection of Migratory Birds and Animals.

The CDFG also lists species as threatened or endangered, or candidates for listing as threatened or endangered. Lower sensitivity animals may be listed as “species of special concern” (CDFG 2000). The CDFG further classifies some species under the following categories: “fully protected”, “protected furbearer,” “harvest species,” “protected amphibian,” and “protected reptile.” The designation “protected” indicates that a species may to be taken or possessed except under special permit from the CDFG; “fully protected” indicates that a species can be taken only for scientific purposes. The designation “harvest species” indicates that take of the species is controlled by the state government.

No rare, threatened, or endangered animal species were observed on-site. One sensitive animal species, the San Diego black-tailed jackrabbit, was detected on-site. This species is discussed below.

San Diego black-tailed jackrabbit (*Lepus californicus benettii*)

The San Diego black-tailed jackrabbit is both a state and federal Species of Concern. This species typically occurs in open grassland and sparsely vegetated areas. This species was identified on-site by scat.
Forty sensitive species have the potential to occur on-site and are discussed in Appendix D. Of the forty species, none have a high potential to occur, and three have a moderate potential to occur. The species with a moderate potential to occur on-site are northern red diamond rattlesnake (*Crotalus ruber ruber*), coast rosy boa (*Charina trivirgata roseofusca*) and southern mule deer (*Odocileus hemionus fuiliginata*). All of these species are state and/or federal special concern species except for the southern mule deer which is a County sensitive species.

Two federal and/or state listed species have a low potential to occur on-site. These include the Quino checkerspot butterfly (*Ephydryas editha quino*) and California gnatcatcher (*Polioptila californica*). Both of these species are discussed below.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Status: Federally listed as Endangered.

The United States Fish and Wildlife Service (USFWS) officially listed the Quino checkerspot butterfly (*Euphydryas editha quino*) as "endangered" on January 16, 1997 (USFWS 1997). For this reason the Quino checkerspot is protected under the provisions of the Endangered Species Act of 1973, as amended. As such, "take" of this species, either directly or indirectly, is prohibited by law. In order to help land owners in preventing an unknowing "take" of this species, the USFWS has required that land owners have a protocol survey conducted on their land prior to project implementation in order to determine the presence or absence of this species.

The Quino checkerspot butterfly is one of several subspecies of *Euphydryas editha*. It is a member of the brush-footed butterfly family (Nymphalidae). The Quino checkerspot is associated with a variety of habitats which include clay soil meadows, grassland, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland and semi-desert (Ballmer, *et al*., 2000). Despite association with a wide range of habitat, distribution of this species is restricted to areas which support the larval host plants. The Quino's primary host plant is *Plantago erecta*. Other possible larval host plant species include *Plantago patagonica*, *Antirhinnum coulterianum*, *Castilleja exserta* and/or *Cordylanthus rigidus* (USFWS 2002) as well as *Collinsia* and possibly other Scrophulariaceae (Ballmer *et al.* 2000). Generally the flight season for the Quino checkerspot occurs from late February through April, peaking in March or April.

A total of six focused survey were conducted by Andrew Pigniolo (Permit # 053020-0) during the 2005 flight season. No Quino checkerspot butterflies or host plants were observed. The potential for this species to occur on-site is low.

California Gnatcatcher (*Polioptila californica*)

Status: Federally listed as Threatened, State Species of Concern

The California gnatcatcher (CAGN), a Federally Threatened species and California Species of Concern, is a small gray songbird that is a resident of scrub-dominated communities in southwestern California from the Los Angeles Basin through Baja California, Mexico. California gnatcatcher populations have declined due to extensive loss of Diegan coastal sage scrub habitat to urban and agricultural uses.

The potential for the California gnatcatcher to occur on-site is low because this species is not known to occur this far inland, in big sagebrush scrub, or in habitat that is this disturbed.

5.0 ANTICIPATED PROJECT IMPACTS

This section addresses potential direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project, and provides analyses of significance for each potential impact.

Direct Impacts are immediate impacts resulting from the permanent removal of habitat. For purposes of this assessment, all biological resources on-site will be considered direct impacts.

Indirect Impacts result from changes in land use adjacent to natural habitat and primarily result from adverse "edge effects;" either short-term indirect impacts related to construction or long-term, chronic indirect impacts associated with urban development. During construction of the project, short-term indirect impacts include dust and noise which could temporarily disrupt habitat and species vitality or construction related soil erosion and run-off. Long-term indirect impacts may include intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, use of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrological changes (e.g., groundwater level and quality).

Cumulative Impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor, but collectively significant as they occur over a period of time.

Thresholds of Significance

The evaluation of whether or not an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent

loss of an important resource, such as a population of a rare plant or animal. Impacts may be important locally because they result in an adverse alteration of existing site conditions, but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether or not that impact can be mitigated to a level below significant. Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant.

5.1 Proposed Project and Potential Impacts

The proposed project is the development of 5.13 acre gross parcel into a church including the sanctuary building, education building, multi-purpose building and parking lot. Biological resources are depicted in Figure 3.

Table 2
Habitat Acreages and Potential Impacts

Habitat	Total Acres	Direct Impacts (acres)	Mitigation Ratio	Off-site Conservation (acres)
Big Sagebrush Scrub	4.96	4.96	1:1	4.96
Developed	0.17	0.17	NA	0
Total	**5.13**	**5.13**		**4.96**

5.2 Significance Of Impacts

Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. These levels of impacts were applied to the project site and are used below in the discussion of specific potential impacts.

Developed

Impacts to developed habitat on-site would not be considered significant. This area includes the remaining concrete pads and pilings remaining from the previous development.

Big Sagebrush Scrub

Impacts are proposed to the big sagebrush scrub habitat on-site. All 4.96 acres of this habitat on-site will be impacted as a result of the proposed project. These impacts would be considered locally important.

Sensitive Plant Species

No sensitive plant species were documented on-site. No impacts to sensitive plant species are expected to occur.

5.3 Cumulative Impacts

The project will impact approximately 4.96 acres of big sage brush scrub. This amount represents 0.003% of an approximate 1645 acres of big sage brush scrub in the County of San Diego. This estimate does not include big sage brush scrub habitat that extends across the US-Mexico border. There are no projects indentified within a 3 mile radius of the St. Adelaide Church site that have or will impact big sage brush scrub. Therefore the proposed impact represents a less than significant cumulative impact.

Sensitive Wildlife Species

Impacts to one sensitive species observed on-site, the San Diego black-tailed jack rabbit, would be considered locally important. In addition, impacts to the wildlife species with a high and moderate potential to occur would be considered locally important.

6.0 PROPOSED MITIGATION

Under CEQA, mitigation is required for all significant biological impacts (i.e. impacts within highly constrained areas). In addition, the CDFG 1600 and the ACOE 404 permit process generally require mitigation for the loss of wetland resources. The following mitigation measures are recommendations to locally important biological impacts. Although mitigation measures are not often required for locally important impacts, local jurisdictions often implement these measures to minimize cumulative impacts within the region.

According to Appendix G of the State CEQA guidelines, the proposed project would have a potentially significant impact to on-site biological resources if it would:

- Have a substantial adverse affect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Under CEQA, mitigation is required for all significant biological impacts. Mitigation, per resource, is discussed below with corresponding level of significance after mitigation.

Big Sagebrush Scrub

The entire site was developed and occupied from 1941 to 1946 for barracks that were occupied by the Camp Lockett Military Reservation. After 1946 the site served as a medical care facility for the military (Laguna Mountain Environmental March 2006). Due to the limited acreage of the impactthe fact that the site is disturbed as is evidenced by the remaining concrete structure pads, and that site is surrounded by rural development, a mitigation ratio of 1:1 is appropriate. Potential impacts to 4.96 acres will be mitigated at a 1:1 ratio. Mitigation requirements will be achieved through the acquisition of 4.96 acres off-site of similar or higher value habitat. The proposed mitigation for the locally important impacts ensures that the proposed project does not contribute a significant cumulative impact within the region.

Sensitive Wildlife Species

Impacts to the sensitive wildlife species observed on-site and with a high and moderate potential to occur will be mitigated through the habitat based mitigation for impacts to the big sagebrush scrub.

Cumulative Impacts

As discussed in Section 5.3 above, the project will not contribute to cumulatively considerable impacts.

7.0 LITERATURE CITED

AOU. American Ornithological Union. 1998, 2000. Forty-second Supplement to the American Ornithologists' Union Checklist of North American Birds.

Bowman, R. H. 1973. Soil Survey, San Diego Area, California, Part 1. United States Department of Agriculture. 104 pp. + appendices.

CDFG. California Department of Fish and Game. 1999. List of CDFG Special Status Plants, Animals and Natural Communities of San Diego County, California Natural Diversity Data Base, CDFG Natural Heritage Division, Sacramento.

-- California Department of Fish and Game. 1999. "Endangered, Threatened and Rare Plants of California." State of California Dept. of Fish and Game, Natural Heritage Division, Plant Conservation Program, Sacramento. April 1999.

-- California Department of Fish and Game.2000. CDFG Natural Diversity Data Base. Special Animals. July 2000.

-- California Department of Fish and Game. 2001. "State and Federal Endangered, Rare, and Threatened Animals of California." State of California Resources Agency, Sacramento. October 2001.

CNPS. 2003. Rare and Endangered Plants of California Electronic Inventory. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society.

County of San Diego. Biological Mapping Requirements, June 2002.

County of San Diego. Biological Mitigation Ordinance, Ordinance No. 8845.

County of San Diego. Resource Protection Ordinance, Ordinance No. 7968.

Hickman, J. C. 1993. The Jepson Manual of Higher Plants of California. University of California Press, Berkeley.

Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento, CA. 157 pp.

Jennings, M. R. 1983. An Annotated Checklist of the Amphibians and Reptiles of Southern California. California Department of Fish and Game 69(3):151-171.

Jones, J.K., *ET AL*. 1992. Revised Checklist of North American Mammals North of Mexico, 1991. Occasional Papers The Museum Texas Tech. University. Number 146. February 7, 1992.

Laguna Mountain Environmental, Inc. March 2006. Cultural Resources Survey of the Saint Adelaide Catholic Church Project, Campo California (MUP 04-056, ER 04-21-004).

Oberbauer, T. 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. San Diego Association of Governments, San Diego, CA 6 pp.

Powell, J.A., C.L. Hogue. 1979. California Insects. University of California Press, Berkeley.

Stebbins, R. C. 2003. Field Guide to Western Reptiles and Amphibians Houghton Mifflin Co., Boston.

Unitt, P. A. 1984. Birds of San Diego County. Memoir 13, San Diego Society of Natural History. 276 pp.

USGS. U.S. Geological Survey. 2004. Bat Inventory of the San Diego County MSCP Area. <http://www.sdcounty.ca.gov/dplu/ [go to MSCP Portal].

USFWS. U.S. Fish and Wildlife Service. 2001. U.S. Endangered, Threatened and Candidate Plant and Animal Species by State and Lead Region. U.S. Department of the Interior. United States Fish and Wildlife Service Threatened and Endangered Species System, 12/2001.

Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White. 1990. California's Wildlife, Volume III, Mammals. State of California Department of Fish and Game, Sacramento. 407 pp.

8.0 CERTIFICATION

This report has been prepared by Robin Church, County Certified Biologist.

APPENDIX A

PLANTS SPECIES OBSERVED

APPENDIX A PLANT SPECIES OBSERVED ON THE SAINT ADELAIDE CHURCH PROJECT			
Family Name	Species Name	Common Name	Habitat
	ANGIOSPERMS: DICOTS		
Asteraceae	***Acourtia microcephala***	Sacapellote	BSS
Asteraceae	***Ambrosia psilostachya***	Western Ragweed	BSS
Asteraceae	***Artemisia dracunculus***	Tarragon, Dragon Sagewort	BSS
Asteraceae	***Artemisia tridentata*** ssp. ***tridentata***	Big Sagebrush	BSS
Asteraceae	***Baccharis sarothroides***	Broom Baccharis	BSS
Asteraceae	***Chaenactis glabriuscula*** var.	Yellow Pincushion	BSS
Asteraceae	****Chamomilla suaveolens***	Common Pineapple-weed	BSS
Asteraceae	***Conyza*** sp.	Horseweed	BSS
Asteraceae	***Ericameria linearifolia***	Interior Goldenbush	BSS
Asteraceae	***Filago californica***	California Filago	BSS
Asteraceae	***Filago depressa***	Dwarf Filago	BSS
Asteraceae	***Gutierrezia sarothrae***	Broom Matchweed/snakeweed	BSS
Asteraceae	***Lasthenia californica***	Common Goldfields	BSS
Asteraceae	***Lessingia filaginifolia*** var. ***filaginifolia***	California-aster	BSS
Asteraceae	***Rafinesquia californica***	California Chicory	BSS
Asteraceae	***Stephanomeria*** sp**.**	Wreath-plant	BSS
Asteraceae	***Uropappus lindleyi***	Silver Puffs	BSS
Boraginaceae	***Amsinckia menziesii*** var. ***intermedia***	Rancher's Fiddleneck	BSS
Boraginaceae	***Cryptantha*** sp.	Common Cryptantha	BSS
Boraginaceae	***Pectocarya linearis*** ssp. ***ferocula***	Slender Pectocarya	BSS
Boraginaceae	***Plagiobothrys*** sp.	Valley Popcornflower	BSS
Brassicaceae	****Brassica nigra***	Black Mustard	BSS
Brassicaceae	***Descurainia pinnata*** ssp.	Tansy Mustard	BSS
Brassicaceae	****Sisymbrium altissimum***	Tumble/jim Hill Mustard	BSS
Cactaceae	***Opuntia phaeacantha***		BSS
Caprifoliaceae	***Sambucus mexicana***	Blue Elderberry	BSS
Caryophyllaceae	***Loeflingia squarrosa*** var. ***squarrosa***	California Loeflingia	BSS
Crassulaceae	***Crassula connata***	Pygmy Weed	BSS
Cucurbitaceae	***Cucurbita foetidissima***	Calabazilla	BSS
Cucurbitaceae	***Cucurbita palmata***	Coyote Melon	BSS
Ericaceae	***Arctostaphylos pungens***	Manzanita	BSS

APPENDIX A
PLANT SPECIES OBSERVED ON THE SAINT ADELAIDE CHURCH PROJECT

Family Name	Species Name	Common Name	Habitat
Fabaceae	***Lotus strigosus***		BSS
Fabaceae	***Lupinus bicolor***	Miniature Lupine	BSS
Fabaceae	****Robinia pseudoacacia***	Black Locust	BSS
Geraniaceae	****Erodium cicutarium***	Red-stem Filaree/storksbill	BSS
Hydrophyllaceae	***Eriodictyon trichocalyx*** var. ***trichocalyx***	Yerba Santa	BSS
Hydrophyllaceae	***Nemophila menziesii*** var.	Baby Blue Eyes	BSS
Lamiaceae	****Lamium amplexicaule***	Henbit	BSS
Lamiaceae	****Marrubium vulgare***	Horehound	BSS
Lamiaceae	***Salvia columbariae***	Chia	BSS
Onagraceae	***Camissonia californica***	False-mustard	BSS
Onagraceae	***Camissonia strigulosa***		BSS
Polemoniaceae	***Eriastrum densifolium*** ssp. ***austromontanun***	Montane Woolly-star	BSS
Polemoniaceae	***Eriastrum sapphirinum*** ssp.	Woolly-star	BSS
Polemoniaceae	***Gilia angelensis***	Grassland Gilia	BSS
Polygonaceae	***Eriogonum fasciculatum*** var. ***fasciculatum***	California Buckwheat	BSS
Rosaceae	***Adenostoma fasciculatum***	Chamise	BSS
Salicaceae	***Salix*** sp.	Willow	BSS
Scrophulariaceae	***Castilleja*** sp.	Paintbrush	BSS
Scrophulariaceae	***Mimulus brevipes***	Slope Semiphore	BSS
Urticaceae	****Urtica urens***	Dwarf Nettle	BSS
	ANGIOSPERMS: MONOCOTS		
Agavaceae	***Yucca whipplei***	Our Lord's Candle	BSS
Poaceae	****Avena barbata***	Slender Wild Oat	BSS
Poaceae	****Bromus diandrus***	Ripgut Grass	BSS
Poaceae	****Bromus madritensis*** ssp. ***rubens***	Foxtail Chess	BSS
Poaceae	****Bromus tectorum***	Cheat Grass, Downy Brome	BSS
Poaceae	****Schismus barbatus***	Mediterranean Schismus	BSS
Poaceae	****Vulpia*** sp.		BSS

APPENDIX B

WILDLIFE SPECIES OBSERVED

APPENDIX B
WILDLIFE SPECIES OBSERVED ON THE ST. ADELAIDE CHURCH PROPERTY

Common Name	Scientific Name	Habitat Observed *	# Observed (estimate)
Invertebrates			
Acmon blue	*Icaricia acmon*	BSS	3
Alfalfa butterfly	*Colias eurytheme*	BSS	1
Behr's metalmark	*Apodemia mormo virgulti*	BSS	2
Common white	*Pontia protodice*	BSS	7
Dragonfly	**Suborder** *Anisoptera*	BSS	1
Lady (unidentified) butterfly	*Vanessa sp.*	BSS	5
Ladybug	**Family** *Coccinellidae*	BSS	1
Red ant	*Formica* sp.	BSS	colony
Sara's orangetip	*Anthocharis sara*	BSS	5
Reptiles			
Granite spiny lizard	*Sceloporus orcutti*	BSS	3
Birds			
American crow	*Corvus brachyrhynchos*	OH	1
Anna's hummingbird	*Calypte anna*	BSS	1
California quail	*Callipepla californica*	BSS	1
California towhee	*Pipilo crissalis*	BSS	2
European starling	*Sturnus vulgaris*	OH	3
Mourning dove	*Zenaida macroura*	OH	3
Mammals			
Black-tailed jackrabbit	*Lepus californicus*	BSS	scat
Desert cottontail rabbit	*Sylvilagus audubonii*	BSS	scat
Valley or Botta's pocket gopher	*Thomomys bottae*	BSS	many holes

BSS= Big Sagebrush Scrub, OH= Overhead

APPENDIX C

SENSITIVE PLANT SPECIES
WITH THE POTENTIAL TO OCCUR

APPENDIX C

SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO SAINT ADELAIDE CHURCH (USGS CAMPO QUAD)

Species	Growth form/Bloom Period	CNPS	R-E-D	State	Federal	Potential to Occur Onsite
ACANTHOMINTHA ILICIFOLIA "San Diego thorn-mint"	Annual herb April - June	1B	2-3-2	CE	FT	Low- This would have been observable at the time of the survey.
ARCTOSTAPHYLOS OTAYENSIS "Otay manzanita"	Shrub (evergreen) January - March	1B	3-2-3	None	SOC	Low- This would have been observable at the time of the survey.
ASTRAGALUS DEANEI "Dean's milk-vetch"	Perennial herb February - May	1B	3-3-3	None	SOC	Low- This would have been observable at the time of the survey.
CALOCHORTUS DUNNII "Dunn's mariposa lily"	Perennial herb (bulbiferous) April - June	1B	2-2-2	CR	SOC	Low- This would have been observable at the time of the survey.
CHAMAEBATIA AUSTRALIS "southern mountain misery"	Shrub (evergreen) Novemeber - May	4	1-2-1	None	None	Low- This would have been observable at the time of the survey.
CHORIZANTHE LEPTOTHECA "Peninsular spineflower"	Annual herb May - August	4	1-2-2	None	None	Low- This would have been observable at the time of the survey.
COMAROSTAPHYLIS DIVERSIFOLIA SSP. DIVERSIFOLIA "summer holly"	Shrub (evergreen) April - June	1B	2-2-2	None	SOC	Low- This would have been observable at the time of the survey.
CUPRESSUS FORBESII "Tecate cypress"	Tree (evergreen)	1B	3-3-2	None	SOC	Low- This would have been observable at the time of the survey.
DUDLEYA VARIEGATA "variegated dudleya"	Perennial herb May - June	1B	2-2-2	None	SOC	Low- This would have been observable at the time of the survey.
HARPAGONELLA PALMERI "Palmer's grapplinghook"	Annual herb March - May	4	1-2-1	None	SOC	Low- This would have been observable at the time of the survey.
HORKELIA TRUNCATA "Ramona horkelia"	Perennial herb May - June	1B	3-1-2	None	None	Low- This would have been observable at the time of the survey.
GERAEA VISCIDA "sticky geraea"	Perennial herb May - June	2	2-1-1	None	None	Low- This would have been observable at the time of the survey.
LATHYRUS SPLENDENS "pride-of-California"	Perennial herb March - June	4	1-1-2	None	None	Low- This would have been observable at the time of the survey.
LEPECHINIA GANDERI "Gander's pitcher sage"	Shrub June - July	1B	3-1-2	None	SOC	Low- This would have been observable at the time of the survey.
LEPIDIUM VIRGINICUM VAR. ROBINSONII "Robinson's pepper-grass"	Annual herb January - July	1B	3-2-2	None	None	Low- This would have been observable at the time of the survey.
LOTUS CRASSIFOLIUS VAR. OTAYENSIS "Otay Mountain lotus"	Perennial herb May - August	1B	3-3-2	None	SOC	Low- This would have been observable at the time of the survey.
MACHAERANTHERA JUNCEA "rush-like bristleweed"	Perenneial herb June - January	4	1-1-1	None	None	Low- This would have been observable at the time of the survey.
MONARDELLA HYPOLEUCA SSP. LANATA "felt-leaved monardella"	Perennial herb (rhizomatous) June - August	1B	2-2-2	None	None	Low- This would have been observable at the time of the survey.
NOLINA INTERRATA "Dehesa nolina"	Perennial herb June - July	1B	3-3-2	CE	SOC	Low- This would have been observable at the time of the survey.
PIPERIA LEPTOPETALA "narrow-petaled rein orchid"	Perennial herb May - July	4	1-1-3	None	None	Low- This would have been observable at the time of the survey.
POLYGALA CORNUTA VAR. FISHIAE "Fish's milkwort"	Shrub (deciduous) May - August	4	1-1-2	None	None	Low- This would have been observable at the time of the survey.

Species	Growth form/Bloom Period	CNPS	R-E-D	State	Federal	Potential to Occur Onsite
QUERCUS CEDROSENSIS "Cedros Island oak"	Tree (evergreen) April - May	2	3-2-1	None	None	Low- This would have been observable at the time of the survey.
RIBES CANTHARIFORME "Moreno currant"	Shrub (deciduous) February - April	1B	3-1-3	None	SOC	Low- This would have been observable at the time of the survey.
SATUREJA CHANDLERI "San Miguel savory"	Perennial herb March - July	1B	2-2-2	None	None	Low- This would have been observable at the time of the survey.
SENECIO GANDERI "Gander's ragwort"	Perennial herb April - May	1B	3-2-3	CR	SOC	Low- This would have been observable at the time of the survey.
TETRACOCCUS DIOICUS "Parry's tetracoccus"	Shrub (deciduous) April - May	1B	3-2-2	None	SOC	Low- This would have been observable at the time of the survey.
VIGUIERA LACINIATA "San Diego County viguiera"	Shrub February - June	4	1-2-1	None	None	Low- This would have been observable at the time of the survey.

APPENDIX D

SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SAINT ADELAIDE PROPERTY

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
INSECTS				
Hermes copper	*Lycaena hermes*	SOC/CSC	Coastal sage scrub, mixed chaparral and chamise chaparral; 0-3000ft. Host plant *Rhamnus crocea* , in proximity to *Eriogonum fasciculatum*	Low- No suitable host plant on-site.
Monarch butterfly	*Danaus plexippus*	-/CSC	Wintering sites composed of grassland, oak woodlands and montaine meadows; host plant milkweed (*Asclepias* sp.). 500 to over 3000ft.	Low- No suitable habitat on-site.
Quino Checkerspot	*Euphydryas editha quino*	FE/SOC	Open shrub habitats, primary host plant is *Plantago erecta.*	Low- None were observed during the focused survey during the 2005 flight season
AMPHIBIANS				
Western spadefoot toad	*Scaphiopus hammondii*	SOC/CSC	Grassland situations can occasionally occur in valley-foothill hardwood woodlands. Populations may persist a few years in orchard-vineyard habitats; 0-2000ft.	Low- No water sources in close proximity.
REPTILES				
Coastal rosy boa	*Charina trivirgata roseofusca*	SOC/CSC	Coastal sage scrub, mixed chaparral, oak woodlands and chamise chaparral. Often found in association with rock outcrops; 0-6800 ft.	Moderate- The habitat has been disturbed and only a few rock outcrops remain.
Coastal western whiptail	*Cnemidophorus tigris multiscutatus*	SOC/CSC	Mixed chaparral, riparian, oak woodlands and chamise chaparral. Prefers rocky firm soils but avoids dense grasslands and wet areas; 0-2000ft.	Low- The density of the habitat on-site is too low.
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SOC/CSC	Grass, chaparral, woodland, desert and coastal sage scrub. Found near rock outcrops with adjacent seasonal drainages; 0-3000ft.	Low- No seasonal drainages were observed on or near the site.
Northern red diamond rattlesnake	*Crotalus ruber ruber*	SOC/CSC	Coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub; 0-3000ft.	Moderate- The habitat on-site and surrounding the site may be suitable but the site has been disturbed.
Orange-throated whiptail	*Cnemidophorus hyperythrus*	SOC/CSC Protected	Can be found in coastal sage scrub, mixed chaparral, grassland, riparian, and chamise chaparral habitats. Open hillsides with brush and rock, well drained soils; 0-1000ft.	Low- No suitable habitat on-site and the site is above the required elevation range.
San Diego banded gecko	*Coleonyx variegatus abbotti*	SOC/--	This species is uncommon in coastal scrub and chaparral mostly occurring in granite or rocky out crops in this habitat (Zeiner *et. al.*, 1988).	Low- No suitable habitat on-site.
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	SOC/CSC	Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grass habitats; needs open areas for basking, ants and other insect prey. 0-8000ft.	Low- No suitable habitat on-site.
San Diego ringneck snake	*Diadophis punctatus similis*	County Sensitive	Coastal sage scrub, mixed chaparral, riparian, oak woodlands, chamise chaparral, mixed conifer, closed cone forest in moist micro-habitats. Can be found on surface during winter after rainfalls or during spring; 0-7200 ft.	Low- No suitable habitat on-site.

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SAINT ADELAIDE PROPERTY

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Silvery legless lizard	*Anniella pulchra pulchra*	SOC/CSC	Coastal sage scrub, grassland, riparian and coastal desert dunes. Found in sandy loam and areas of accumulated leaf litter beneath shrubs and trees in moist micro-habitats; 0 to 5000 ft	Low- No suitable habitat on-site.
MAMMALS				
American badger	*Taxidea taxus*	--/CSC	This species is most abundant in drier open stages of most shrub, forest, and herbaceous habitats; 0 to over 3000ft	Low- No suitable habitat on-site.
Big free-tailed bat	*Nyctinomops macrotis*	--/CSC	This species is found in a variety of plant associations including desert scrub, various woodlands and coniferous forests. Is a colonial roosting species that is typically found in crevices of rugged cliffs and high, rocky	Low- No roosting habitat is available on-site.
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	SOC/CSC	Occupies coastal sage scrub, mixed chaparral, oak woodland, chamise chaparral, and mixed conifer habitats; 0 to over 3000ft	Low- The habitat on-site is not suitable and no evidence of this species was observed
Fringed Myotis	*Myotis thysanodes*	SOC/CSC	This species may be found in a variety of plant communities including desert scrub, oak woodlands, and pinyon-juniper forests. It is a colonial species that prefers caves, mines and abandoned buildings for roost sites. 0-	Low- No roosting habitat is available on-site.
Greater western mastiff bat	*Eumops perotis californicus*	SOC/CSC	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for	Low- No roosting habitat is available on-site.
Long-eared myotis	*Myotis evotis*	SOC/--	They are found in most brush, woodland, and forest habitats from sea level to 9000 feet, but more typically occurs in coniferous forests at elevations above 7000 feet. Roosts in	Low- No roosting habitat is available on-site.
Long-legged myotis	*Myotis volans*	SOC/--	Most common in woodland and forests above 4000 ft. Also in chaparral, coastal scrub, Great Basin shrub, and early successional stages of woodlands. Uncommon in desert and arid grassland. Roosts in rock crevices, buildings, bark, snags, mines, and caves. Feeds over water and open	Low- No roosting habitat is available on-site.
Mountain Lion	*Felis concolor*	County Sensitive	Species found in a variety of different habitats from desert to coast range forest; 0 to 10,000ft.	Low- The site is surrounded by development and has been graded in the past
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SOC/CSC	Nocturnal. Found in coastal sage scrub and mixed and chamise chaparral. Seeks cover in rocky/gravelly areas with a yucca overstory; 500-3000ft	Low- No suitable habitat on-site.

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SAINT ADELAIDE PROPERTY

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Pallid bat	*Antrozous pallidus*	--/CSC	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub. Prefers snags (especially oak), rocky outcrops, cliffs and crevices with access to open habitats for foraging; 0-6000ft.	Low- No roosting habitat is available on-site.
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	--/CSC	This species is found in a variety of plant associations including desert scrub, coastal scrub and pine oak woodlands. Is a colonial roosting species that is typically found in crevices of rugged cliffs and high, rocky	Low- No roosting habitat is available on-site.
Ringtail	*Bassariscus astutus*	County Sensitive	Nocturnal; found in mixed and chamise chaparral. Nests in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests; 500 to over	Low- No suitable habitat on-site.
San Diego desert woodrat	*Neotoma lepida intermedia*	SOC/CSC	Nocturnal in coastal sage scrub, desert, oak woodlands, chamise chaparral and rocks in moderate to dense vegetation. Most abundant in rocky areas -- prefers rock outcrops and crevices for nest sites, but also builds nests in low branches of trees. 500-3000ft.	Low- No nests or scat were observed.
Small-footed myotis	*Myotis ciliolabrum*	SOC/--	Occurs in arid uplands -- woody and brushy habitats near water. Roosts in caves, buildings, mines, crevices,	Low- No roosting habitat is available on-site.
Southern grasshopper mouse	*Onychomys torridus ramona*	SOC/CSC	Nocturnal in coastal sage scrub, mixed chaparral, grassland, and chamise chaparral. Low to moderate shrub cover	Low- No evidence of this species including scat was observed.
Southern mule deer	*Odocoileus hemionus fuiliginata*	County Sensitive	The mule dear is extremely adaptable occupying all but two or three of the major vegetation types in the western	Moderate- None were observed but it has a potential to occur.
Townsend's western big-eared bat	*Corynorhinos townsendii*	SOC/CSC	Found in all but subalpine and alpine habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for night, day, hibernation or maternity roosts; 500-	Low- No roosting habitat is available on-site.
Yuma myotis	*Myotis yumanensis*	SOC/CSC	Mixed chaparral, riparian, oak woodland and pinon juniper. Optimal habitats are open forests and woodlands with sources of water over which to feed; roosts in buildings, mines, caves, bridges, crevices, and abandoned swallow nests. Sea level to 11,000 feet, but uncommon above 8000 feet.	Low- No roosting habitat is available on-site.
BIRDS				
Bell's sage sparrow	*Amphispiza belli belli*	SOC/CSC	Coastal sage scrub, mixed and chamise chaparral. Nests well hidden in	Low- No suitable habitat on-site.
California gnatcatcher	*Polioptila californica californica*	FT/CSC	Most numerous in low, dense coastal sage scrub habitat of coastal hills.	Low- No suitable habitat on-site.

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE SAINT ADELAIDE PROPERTY

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Coopers Hawk	*Accipiter cooperi*	--/CSC (nesting)	Uncommon migrant and winter vistitor, rare summer resident, during migration and winter found throughout SD County. Found in oak woodlands or edges of woods, nests in tall trees.	Low- No suitable habitat or tall trees on-site.
Golden eagle	*Aquila chrysaetos canadensis*	--/CSC Fully protected	Mountains, foothills, and adjacent grassland, open areas and canyons; 0-11,500 ft. (nesting/wintering)	Low- No suitable habitat or tall trees on-site.
Loggerhead shrike	*Lanius ludovicianus*	SOC/CSC	Roadside vegetation, thickets, savanna, coastal sage scrub, grasslands, riparian, oak woodlands and desert scrub and wash or any open country with high perches as lookouts; 0-3000ft.	Low- No suitable habitat or tall trees on-site.
Northern harrier	*Curcus cyaneus hudsonius*	--/CSC	Grasslands and salt, alkali and freshwater marshes; 0-1000ft. Nests on ground in shrubby vegetation, usually emergent wetlands or along rivers or lakes. May also nest in grasslands, grain fields, or on sagebrush flats several miles from water.	Low- No suitable habitat on-site.
Rufous-crowned sparrow	*Aimophila ruficeps canescens*	SOC/CSC	Favors steep and rocky coastal sage scrub. Also seeks scattered grass in sage scrub and colonizes grass that grows as a successional stage following brush fires (Unitt 1984)	Low- No suitable habitat on-site.
Sharp-shinned hawk (nesting)	*Accipiter striatus*	--/CSC	Open woodlands, residential, larger trees for nesting. Uncommon migrant and winter visitor, casual summer visitor; nesting has not been documented in San Diego County (Unitt 1984)	Low- No suitable habitat or tall trees on-site.
Turkey vulture	*Cathartes aura*	County Sensitive	Spring and fall migrant, uncommon to locally common winter visitor and rare to uncommon summer resident of San Diego County (Unitt 1984)	Low- No suitable habitat or tall trees on-site.

* = Appendix E – Sensitivity Codes

APPENDIX E

SENSITIVITY CODES

SENSITIVITY CODES

FEDERAL SPECIES DESIGNATIONS (USFWS 2001)

Category	
FE	Federal Endangered species
FT	Federal Threatened species
FPE	Taxa proposed to be listed as Endangered.
FPT	Taxa proposed to be listed as Threatened.
SOC	Species of Concern (former Candidate Species)

STATE SPECIES DESIGNATIONS (CDFG 2000)

Category	
SE	State listed as Endangered.
ST	State listed as Threatened.
SR	State-listed Rare
SCE	State candidate for listing as Endangered.
SCT	State candidate for listing as Threatened.
CSC	CDFG "Species of Special Concern".

CALIFORNIA NATIVE PLANT SOCIETY DESIGNATIONS (CNPS 2003)

The CNPS Lists

List	1	Plants of highest priority.
	1A	Plants presumed extinct in California.
	1B	Plants rare, threatened or endangered in California and elsewhere.
List	2	Plants rare, threatened or endangered in California, but more common elsewhere.
List	3	Plants about which we need more information. (A Review List)
List	4	Plants of limited distribution (A Watch List).

The R-E-D Code

R (Rarity)

1. Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
2. Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
3. Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)

1. Not endangered.
2. Endangered in a portion of its range.
3. Endangered throughout its range.

D (Distribution)

1. More or less widespread outside California.
2. Rare outside California.
3. Endemic to California.

APPENDIX F
QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT

FOCUSED SURVEY REPORT
FOR THE
QUINO CHECKERSPOT BUTTERFLY
ON THE ST. ADELAIDE PARCEL, CAMPO,
SAN DIEGO COUNTY, CALIFORNIA

Prepared for:

Robin Church Biological Consulting
9621 Campo Road, Suite C
Spring Valley, CA 91977

Prepared by:

Laguna Mountain Environmental, Inc.
3849 Shasta Street #16
San Diego, CA 92109

May 2005

Introduction

Laguna Mountain Environmental, Inc. (Laguna Mountain) performed adult surveys for the Quino checkerspot butterfly (*Euphydryas editha quino*) on a 5.13-acre parcel in the community of Campo, San Diego County, California (Figure 1). The project is located west of the Tecate Divide and 11/4-miles south of Cameron Corners just east of the community of Campo(Figure 1). The project area is approximately 300 meters west of Highway 94 and approximately 11/2 miles south of the Campo Indian Reservation. It is located at the northeastern corner of the intersection of Custer Road and Sheridan Road in the Campo Valley. The project is located in Section 15, Township 18 South, Range 5 East. The parcel number is APN #656-040-47-00. The project area is shown on the Campo USGS 7.5' Quadrangle (Figure 2). The proposed project is for a Major Use Permit for a Religious Assembly Use and Elementary School in the Mountain Empire Subregional Plan Area.

As part of the current study, a habitat assessment was conducted on the property on March 29, 2005. The habitat assessment determined that non-excluded areas, as defined by the U. S. Fish and Wildlife Service (USFWS 2002), occur on the property. Excluded areas, not recommended for Quino surveys, are defined as:

- Orchards, developed areas or in-fill parcels largely dominated by non-native vegetation;
- Active/in-use agricultural fields without natural or remnant inclusions of native vegetation;
- Closed-canopy forest or riparian area, dense chaparral and small openings completely enclosed with a closed-canopy or dense chaparral area.

Much of the project area is covered with Big Sagebrush Scrub vegetation. Although some of the shrubs are dense, they do not qualify as closed-canopy or dense chaparral or meet the criteria as specified above. This report documents the results of focused surveys conducted throughout the approximately 5.13-acres of non-excluded habitat on the project site.

Background

The United States Fish and Wildlife Service (USFWS) officially listed the quino checkerspot butterfly (*Euphydryas editha quino*) as "endangered" on January 16, 1997 (USFWS 1997). For this reason the quino checkerspot is protected under the provisions of the Endangered Species Act of 1973, as amended. As such, "take" of this species, either directly or indirectly, is prohibited by law. In order to help landowners in preventing an unknowing "take" of this species, the USFWS has required that landowners have a protocol survey conducted on their land prior to project implementation in order to determine the presence or absence of this species.

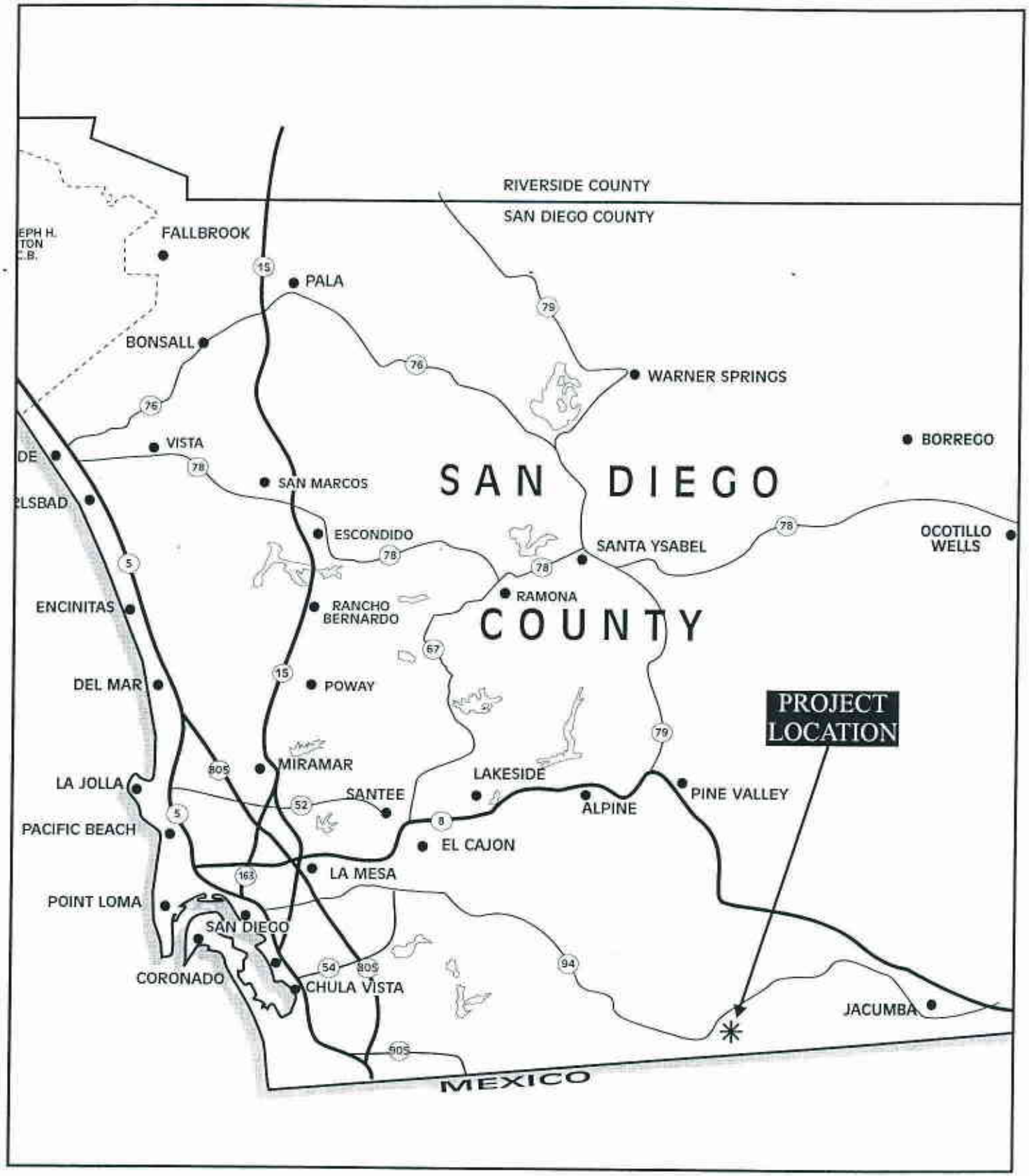
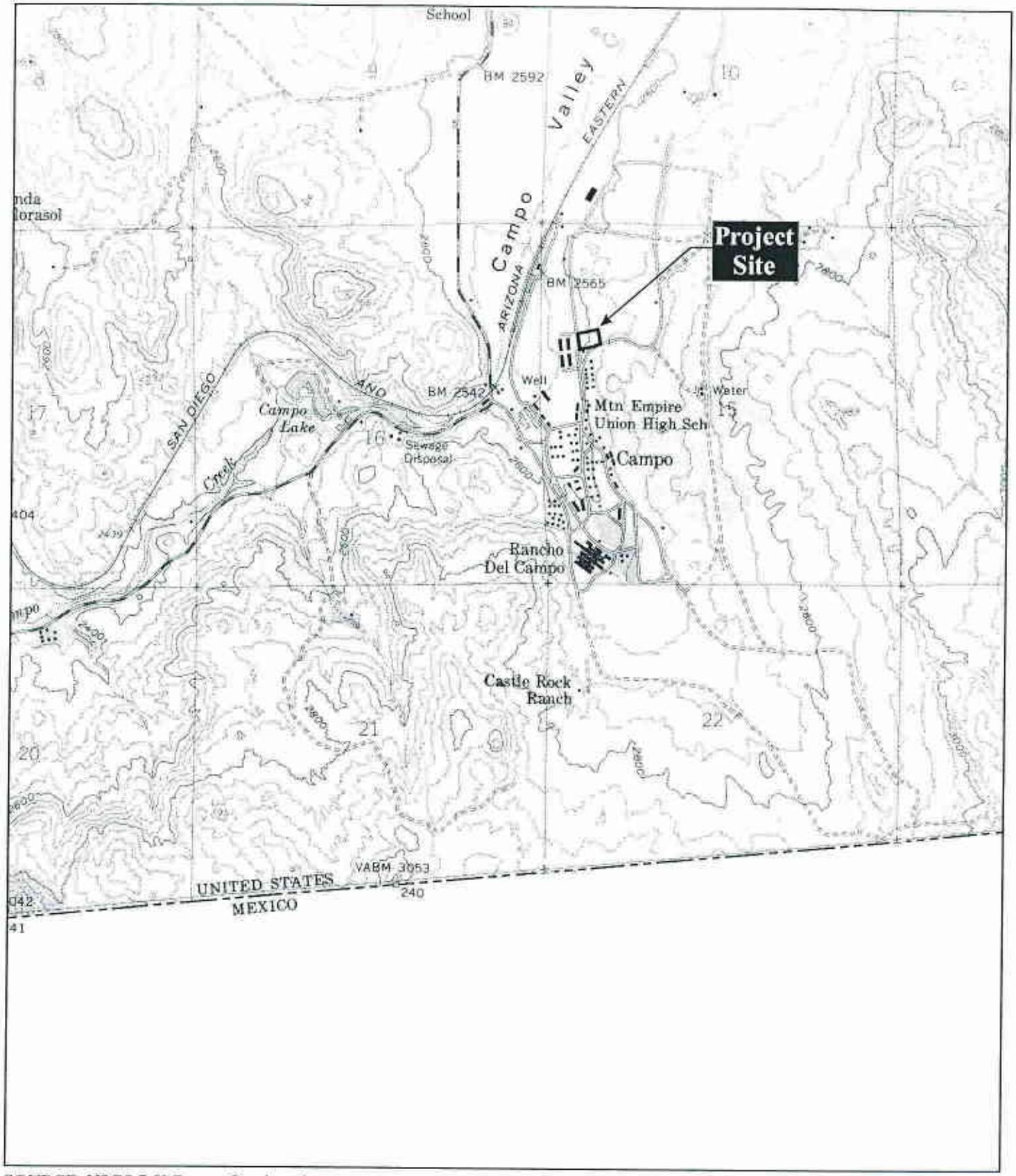


Figure 1
Regional Location Map

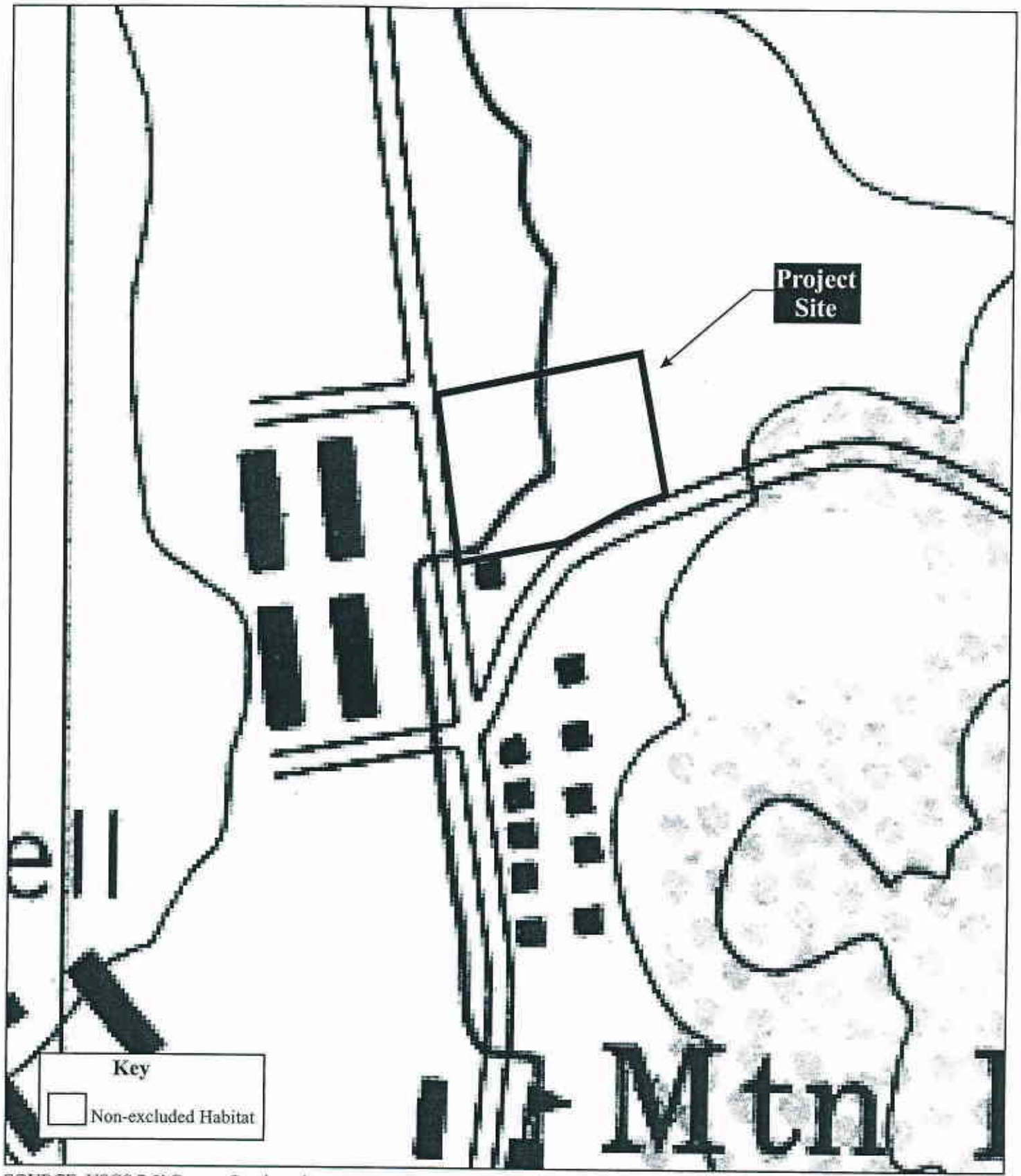
Laguna Mountain Environmental, Inc.



SOURCE: USGS 7.5' Campo Quadrangle

Figure 2
Project Location

Laguna Mountain Environmental, Inc.



SOURCE: USGS 7.5' Campo Quadrangle

N

0 25

FEET

Figure 3
Habitat Assessment

Laguna Mountain Environmental, Inc.

The quino checkerspot butterfly is one of several subspecies of *Euphydryas editha*. It is a member of the brush-footed butterfly family (Nymphalidae). The quino checkerspot is associated with a variety of habitats which include clay soil meadows, grassland, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland and semi-desert (Ballmer et al. 2000). Despite association with a wide range of habitat, distribution of this species is restricted to areas which support the larval host plants. The quino's primary host plant is *Plantago erecta*. Other possible larval host plant species include *Plantago patagonica*, *Antirhinnum coulterianum*, *Castilleja exserta* and/or *Cordylanthus rigidus* (USFWS 2002) as well as *Collinsia* and possibly other Scrophulariaceae (Ballmer et al. 2000). Generally the flight season for the quino checkerspot occurs from late February through April, peaking in March or April.

Methods

Survey methods followed those outlined in the Year 2002 Survey Protocol for the Quino checkerspot butterfly (USFWS 2002).

- Surveys were conducted by a permitted biologist and no concurrently with other focused surveys.
- Surveys were conducted on non-consecutive days once per week throughout the flight season.
- Surveys were conducted only during acceptable weather conditions (i.e. no fog, drizzle, rain; no sustained winds greater than 15 miles per hour measured four to six feet above ground level; temperature in the shade at ground level was not less than 60°F on a clear, sunny day; or temperature in the shade at ground level was not less than 70°F on an overcast or cloudy day.
- Site was surveyed at an average rate of 10 to 15 acres per hour.

The surveys for adult Quino checkerspot were conducted by Andrew R. Pigniolo (Permit No.TE-053020-0) between March 29 and May 10, 2005. The surveys were conducted on a weekly basis when acceptable weather conditions defined in the U. S. Fish and Wildlife Service protocol were present. The surveys involved slowly walking roughly parallel transects throughout the non-excluded areas of the property including disturbed area. The survey was conducted at an average rate of approximately 8 acres per hour. The surveyor stopped periodically to scan adjacent areas for moving butterflies. All butterfly species observed were identified and recorded.

Survey times and weather conditions are presented in the field notes provided in Appendix A and summarized in Table 1.

Table 1. Quino Checkerspot Adult Survey Dates and Weather Conditions

Date	Time		Weather Conditions
March 29, 2005	start: 1515	end: 1600	start: partly cloudy, air temp: 60° F, wind between 2 and 6 mph end: partly cloudy, air temp: 57° F, wind between 2 and 6 mph
April 7, 2005	start: 1530	end: 1630	start: sunny & clear, air temp: 62° F, wind between 2 and 9 mph end: sunny & clear, air temp: 60° F, wind between 2 and 9 mph
April 14, 2005	start: 1330	end: 1430	start: sunny & clear, air temp: 70° F, wind between 0 and 4 mph end: sunny & clear, air temp: 68° F, wind between 0 and 4 mph
April 21, 2005	start: 1530	end: 1615	start: sunny & clear, air temp: 70° F, wind between 0 and 6 mph end: sunny & clear, air temp: 69° F, wind between 0 and 4 mph
May 1, 2005	start: 1600	end: 1645	start: sunny & clear, air temp: 71° F, wind between 0 and 4 mph end:,sunny & clear, air temp: 69° F, wind between 0 and 4 mph
May 10, 2005	start: 1600	end: 1645	start: sunny with some clouds, air temp: 64° F, wind between 2 and 6 mph end: sunny with some clouds, air temp: 65° F, wind between 2 and 6 mph

Physical Setting

The St. Adelaide project area consists of approximately 5.13 acres in the Campo area. The site is currently undeveloped and is located at the northeastern corner of the intersection of Custer Road and Sheridan Road in the Campo Valley. Current land use consists of a unused dirt road and old structure pads. Also, a more recent grading/scraping disturbance has occurred in the northwestern corner of the parcel, which contains more annual flowers and potential nectar sources.

The project generally consists of a flat area with the southeastern portion of the parcel being higher in elevation. Elevations onsite range from approximately 2595 feet above mean sea level along the northwest portion of the project area increasing to approximately 2610 feet above mean sea level (MSL) at the far southeastern portion of the project area. Campo Creek is present approximately 1/4-mile west of the project area.

The two soil series that occur throughout the project area include the Mottsville series soils and the La Posta series soils (USDA 1973). Mottsville series consists of excessively drained, very deep, loamy coarse sands that in some areas had formed in sandy sediments transported from granitic rock. This soil occurs in valleys and on alluvial fans. Mottsville loamy course sand with 2 to 9 percent slopes covers the northern portion of the property. The representative profile includes a grayish-brown surface layer, slightly acidic loamy coarse sand about 6 inches thick. The next layer is brown, slightly acid loamy coarse sand and extends to a depth of more than 60 inches (USDA 1973).

The La Posta series consists of somewhat excessively drained loamy coarse sands that formed in material weathered from granodiorite. La Posta rocky loamy coarse sand with 5 to 30 percent slopes (eroded) occurs in some areas with rock outcrops that cover 5 to 10 percent of the surface along the far southwest portion of the project area. The representative profile includes a surface layer that is grayish-brown and brown, slightly acidic and neutral loamy coarse sand that grades to deeply weathered grandiorite at a depth of about 29 inches (USDA 1973).

Vegetation

One vegetation community, Big sagebrush scrub community, occurs in the project area. A complete list of plant species observed on-site is included in Appendix B.

Big sagebrush scrub (*Artemisia tridentata*) is characterized by soft-woody shrubs with an open canopy and bare ground underneath and between shrubs. This plant community is dominated by big sagebrush scrub with occurrences of non-native and native grasses and annual forbs and other shrub species depending upon the locality. Big Sagebrush (*Artemisia tridentata* ssp. *tridentata*) dominates the project area. The area was historically graded, developed and partially landscaped. The existing vegetation in the area appears largely to be secondary regrowth after past disturbance.

Larval Hostplants

No potential host plants were observed throughout the property during the habitat assessment.

Results

No adult or larval Quino checkerspot were detected during the surveys of the project area. Butterfly species observed are summarized in Table 2. Butterfly numbers and diversity were relatively low within the project area due to the secondary nature of the vegetation.

Conclusion

The results of the focused surveys indicate that the Quino checkerspot does not occur in the project area. Areas of open ground, and host plants that would potentially serve as Quino habitat were searched repeatedly during each weekly survey, with negative results. Neither Quino larvae or adults were observed during the survey period.

Certification

This concludes the report for a focused survey for the quino checkerspot butterfly conducted on the St. Adelaide Property.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Andrew Pigniolo, Federal Permit Number TE-053020-0 Date

Table 2. Butterfly Species Observed.

Survey Dates	3/29/05	4/7/05	4/14/05	4/21/05	5/1/05	5/10/05
Species						
Acmon blue (*Icaricia acmon*)	0	0	0	0	2	1
Alfalfa butterfly *(Colias eurytheme)*	0	0	0	1	0	0
Behr's metalmark (*Apodemia mormo virgulti*)	0	0	0	1	0	1
Common White (*Pontia protodice*)	0	0	0	1	2	4
Lady (Species Undetermined)	2	1	2	0	0	0
Sara orangetip (*Anthocharis sara*)	1	0	2	1	1	0
Total	3	1	4	3	5	6

References Cited

Ballmer, G., Hawks, D., Osborne, K., and Pratt, G.

2000 *The Quino Checkerspot Butterfly; Euphydryas editha quino*. Unpublished manuscript.

U.S. Fish and Wildlife Service (USFWS)

1997 *Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly.* Federal Register 62(11):2313-2322.

2002 *Quino Checkerspot Butterfly (Euphydryas editha quino).* Survey Protocol Information. Unpublished manuscript available from the Carlsbad Field Office, Carlsbad, California.

United States Department of Agriculture (USDA)

1973 *Soil Survey, San Diego Area, California.*

APPENDIX A. Copies of Original Field Notes

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary)
St. Adelaide Quino

DATE: 3/29/05 DAY OF WEEK: Tuesday START TIME: 1515 END TIME: 1600

START CONDITIONS - WIND: 2-6mph TEMPERATURE: 60° SKY: Partly cloudy

END CONDITIONS - WIND: 2-6mph TEMPERATURE: 57° SKY: Partly cloudy

OBSERVATIONS:

Habitat Conditions: Habital generall y poor with few nectaring sources. Afternoon got cooler.

Host Plant Conditions: None observed

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	
Alfalfa butterfly (*Colias eurytheme*)	
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	
Brown elfin (*Incisalia augustinus*)	
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	
Echo blue (*Celastrina ladon echo*)	
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 3/29/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	1
Satyr anglewing (*Polygonia satyrus*)	
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Lad x	11
Total	3

Surveyor: Andrew Pigniolo

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary)
St. Adelaide

DATE: 4/7/05 DAY OF WEEK: Thursday START TIME: 1530 END TIME: 1630

START CONDITIONS - WIND: 2-9 mph TEMPERATURE: 62° SKY: Sunny & Clear

END CONDITIONS - WIND: 2-9 mph TEMPERATURE: 60° SKY: Sunny with high haze

OBSERVATIONS:

Habitat Conditions: Amsinckia and Eryptantha in good bloom and healthy

Host Plant Conditions: None observed.

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	
Alfalfa butterfly (*Colias eurytheme*)	
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	
Brown elfin (*Incisalia augustinus*)	
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	
Echo blue (*Celastrina ladon echo*)	
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 4/7/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	
Satyr anglewing (*Polygonia satyrus*)	
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Lady	1
Total	1

Surveyor: Andrew Pignatello

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary) St. Adelaide

DATE: 4/14/05 DAY OF WEEK: Thursday START TIME: 1330 END TIME: 1430

START CONDITIONS - WIND: 0-4mph TEMPERATURE: 70° SKY: Sunny & Clear

END CONDITIONS - WIND: 0-4mph TEMPERATURE: 68° SKY: Sunny & clear

OBSERVATIONS:

Habitat Conditions: Good, Eryptantha and Amsinckia in good bloom.

Host Plant Conditions: None observed

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	
Alfalfa butterfly (*Colias eurytheme*)	
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	
Brown elfin (*Incisalia augustinus*)	
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	
Echo blue (*Celastrina ladon echo*)	
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 4/14/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	11
Satyr anglewing (*Polygonia satyrus*)	
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Lady	1
Total	4

Surveyor: Andrew Pigniolo

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary)
St. Adelaide

DATE: 4/21/05 DAY OF WEEK: Thursday START TIME: 1530 END TIME: 1615

START CONDITIONS - WIND: 0-6mph TEMPERATURE: 70° SKY: Sunny & clear

END CONDITIONS - WIND: 0-4mph TEMPERATURE: 69° SKY: Sunny & clear

OBSERVATIONS:

Habitat Conditions: Conditions good. Amsinckia past prime but cryptantha still in good bloom

Host Plant Conditions: None observed

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	
Alfalfa butterfly (*Colias eurytheme*)	1
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	1
Brown elfin (*Incisalia augustinus*)	
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	
Echo blue (*Celastrina ladon echo*)	1
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 4/21/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	1
Satyr anglewing (*Polygonia satyrus*)	
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Total	4

Surveyor: Andrew Pigniolo

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary)
St Adelaide

DATE: 5/1/05 DAY OF WEEK: Sunday START TIME: 1600 END TIME: 1645

START CONDITIONS - WIND: 0-4° TEMPERATURE: 71° SKY: Sunny & Clear

END CONDITIONS - WIND: 0-4° TEMPERATURE: 69° SKY: Sunny & Clear

OBSERVATIONS:

Habitat Conditions: Good, Some flowers drying out.

Host Plant Conditions: None observed

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	11
Alfalfa butterfly (*Colias eurytheme*)	
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	
Brown elfin (*Incisalia augustinus*)	
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	11
Echo blue (*Celastrina ladon echo*)	
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 5/1/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	
Satyr anglewing (*Polygonia satyrus*)	1
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Total	5

Surveyor: Andrew Pigniolo

QUINO SURVEY FIELD FORM

PROJECT/LOCATION (attach figure if necessary)
St. Adelaide

DATE: 5/9/05 DAY OF WEEK: Tuesday START TIME: 1600 END TIME: 1645

START CONDITIONS - WIND: 2-6mph TEMPERATURE: 64° SKY: Sunny with a few small clouds

END CONDITIONS - WIND: 2-6 mph TEMPERATURE: 65° SKY: Sunny with a few clouds

OBSERVATIONS:

Habitat Conditions: Lasthenia is pretty much over. Few flowers are out.

Host Plant Conditions: None observed

SPECIES OBSERVED:

	TOTAL
Acmon blue (*Icaricia acmon*)	
Alfalfa butterfly (*Colias eurytheme*)	1
Anise swallowtail (*Papilio zelicaon*)	
Behr's metalmark (*Apodemia mormo virgulti*)	
Brown elfin (*Incisalia augustinus*)	1
Buckeye (*Junonia coenia*)	
Cabbage white (*Artogeia rapae*)	
California dogface (*Zerene eurydice*)	
California ringlet (*Coenonympha california california*)	
California sister (*Adelpha bredowii californica*)	
California tortoiseshell (*Nymphalis californica*)	
Chalcedon checkerspot (*Euphydryas chalcedona chalcedona*)	
Common white (*Pontia protodice*)	11
Echo blue (*Celastrina ladon echo*)	
Edward's blue (*Hemiargus ceraunus gyas*)	
Felder's orangetip (*Anthocharis cethura*)	
Funereal duskywing (*Erynnis funeralis*)	
Gabb's checkerspot (*Charidryas gabbii*)	
Gray hairstreak (*Strymon melinus*)	
Great purple hairstreak (*Atlides halesus*)	

DATE: 5/9/05

SPECIES OBSERVED (Continued):

	TOTAL
Harford's sulfer (*Colias harfordi*)	
Henne's checkerspot (*Duphydryas chalcedona hennei*)	
Leanira checkerspot (*Thessalia leanira wrighti*)	
Lorquin's admiral (*Basilarchia lorquini*)	
Marine blue (*Leptotes marina*)	
Monarch (*Danaus plexippus*)	
Mourning cloak (*Nymphalis antiopa*)	
Mylitta crescent (*Phyciodes mylitta*)	
Painted lady (*Vanessa cardui*)	
Pale swallowtail (*Papilio eurymedon*)	
Perplexing hairstreak (*Callophrys perplexa*)	
Pigmy blue (*Brephidium exilis*)	
Queen butterfly (*Danaus gilippus*)	
Quino checkerspot (*Euphydryas editha quino*)	
Red admiral (*Vanessa atalanta*)	
Sara orangetip (*Anthocharis sara*)	
Satyr anglewing (*Polygonia satyrus*)	
Sleepy orange (*Eurema nicippe*)	
Sonoran blue (*Philotes sonorensis*)	
Southern blue (*Glaucopsyche lygdamus australis*)	
Virginia lady (*Vanessa virginiensis*)	
West Coast lady (*Vanessa annabella*)	
Western tailed blue (*Everes amyntula*)	
Western tiger swallowtail (*Papilio rutulus*)	
Wright's metalmark (*Calephelis wrightii*)	
Total	6

Surveyor: Andrew Pigniolo

APPENDIX B. Plant Species Observed

	APPENDIX B PLANT SPECIES OBSERVED ON THE SAINT ADELAIDE CHURCH PROJECT		
Family Name	Species Name	Common Name	Habitat
	ANGIOSPERMS: DICOTS		
Asteraceae	***Acourtia microcephala***	Sacapellote	BSS
Asteraceae	***Ambrosia psilostachya***	Western Ragweed	BSS
Asteraceae	***Artemisia dracunculus***	Tarragon, Dragon Sagewort	BSS
Asteraceae	***Artemisia tridentata*** ssp. ***tridentata***	Big Sagebrush	BSS
Asteraceae	***Baccharis sarothroides***	Broom Baccharis	BSS
Asteraceae	***Chaenactis glabriuscula*** var.	Yellow Pincushion	BSS
Asteraceae	****Chamomilla suaveolens***	Common Pineapple-weed	BSS
Asteraceae	***Conyza*** sp.	Horseweed	BSS
Asteraceae	***Ericameria linearifolia***	Interior Goldenbush	BSS
Asteraceae	***Filago californica***	California Filago	BSS
Asteraceae	***Filago depressa***	Dwarf Filago	BSS
Asteraceae	***Gutierrezia sarothrae***	Broom Matchweed/snakeweed	BSS
Asteraceae	***Lasthenia californica***	Common Goldfields	BSS
Asteraceae	***Lessingia filaginifolia*** var. ***filaginifolia***	California-aster	BSS
Asteraceae	***Rafinesquia californica***	California Chicory	BSS
Asteraceae	***Stephanomeria*** sp.	Wreath-plant	BSS
Asteraceae	***Uropappus lindleyi***	Silver Puffs	BSS
Boraginaceae	***Amsinckia menziesii*** var. ***intermedia***	Rancher's Fiddleneck	BSS
Boraginaceae	***Cryptantha*** sp.	Common Cryptantha	BSS
Boraginaceae	***Pectocarya linearis*** ssp. ***ferocula***	Slender Pectocarya	BSS
Boraginaceae	***Plagiobothrys*** sp.	Valley Popcornflower	BSS
Brassicaceae	****Brassica nigra***	Black Mustard	BSS
Brassicaceae	***Descurainia pinnata*** ssp.	Tansy Mustard	BSS
Brassicaceae	****Sisymbrium altissimum***	Tumble/jim Hill Mustard	BSS
Cactaceae	***Opuntia phaeacantha***		BSS
Caprifoliaceae	***Sambucus mexicana***	Blue Elderberry	BSS
Caryophyllaceae	***Loeflingia squarrosa*** var. ***squarrosa***	California Loeflingia	BSS
Crassulaceae	***Crassula connata***	Pygmy Weed	BSS
Cucurbitaceae	***Cucurbita foetidissima***	Calabazilla	BSS
Cucurbitaceae	***Cucurbita palmata***	Coyote Melon	BSS
Ericaceae	***Arctostaphylos pungens***	Manzanita	BSS

	APPENDIX B PLANT SPECIES OBSERVED ON THE SAINT ADELAIDE CHURCH PROJECT		
Family Name	Species Name	Common Name	Habitat
Fabaceae	***Lotus strigosus***		BSS
Fabaceae	***Lupinus bicolor***	Miniature Lupine	BSS
Fabaceae	****Robinia pseudoacacia***	Black Locust	BSS
Geraniaceae	****Erodium cicutarium***	Red-stem Filaree/storksbill	BSS
Hydrophyllaceae	***Eriodictyon trichocalyx*** var. ***trichocalyx***	Yerba Santa	BSS
Hydrophyllaceae	***Nemophila menziesii*** var.	Baby Blue Eyes	BSS
Lamiaceae	****Lamium amplexicaule***	Henbit	BSS
Lamiaceae	****Marrubium vulgare***	Horehound	BSS
Lamiaceae	***Salvia columbariae***	Chia	BSS
Onagraceae	***Camissonia californica***	False-mustard	BSS
Onagraceae	***Camissonia strigulosa***		BSS
Polemoniaceae	***Eriastrum densifolium*** ssp. ***austromontanun***	Montane Woolly-star	BSS
Polemoniaceae	***Eriastrum sapphirinum*** ssp.	Woolly-star	BSS
Polemoniaceae	***Gilia angelensis***	Grassland Gilia	BSS
Polygonaceae	***Eriogonum fasciculatum*** var. ***fasciculatum***	California Buckwheat	BSS
Rosaceae	***Adenostoma fasciculatum***	Chamise	BSS
Salicaceae	***Salix*** sp.	Willow	BSS
Scrophulariaceae	***Castilleja*** sp.	Paintbrush	BSS
Scrophulariaceae	***Mimulus brevipes***	Slope Semiphore	BSS
Urticaceae	****Urtica urens***	Dwarf Nettle	BSS
	ANGIOSPERMS: MONOCOTS		
Agavaceae	***Yucca whipplei***	Our Lord's Candle	BSS
Poaceae	****Avena barbata***	Slender Wild Oat	BSS
Poaceae	****Bromus diandrus***	Ripgut Grass	BSS
Poaceae	****Bromus madritensis*** ssp. ***rubens***	Foxtail Chess	BSS
Poaceae	****Bromus tectorum***	Cheat Grass, Downy Brome	BSS
Poaceae	****Schismus barbatus***	Mediterranean Schismus	BSS
Poaceae	****Vulpia*** sp.		BSS